

Spring 2022 Tree Height and Land Cover Intensive Observation Period 22 April – 22 May 2022

Spring 2022 IOP Kick-Off Webinar



The Trees Around the GLOBE Student Research Campaign, in collaboration with the GLOBE European Phenology Campaign, UNEP/GRID-Warsaw Centre (coordinator of GLOBE Poland), and the Urban Heat Island Effect - Surface Temperature Field Campaign, will be holding a special kick-off webinar for the Spring 2022 Tree Height and Land Cover Intensive Observation Period (IOP).

Please join us!

Wednesday, April 6, 2022

11:00am EDT (8:00am PDT, 3:00pm UTC, 5:00pm CET)

Join at: <https://zoom.us/j/7578241037>

Meeting ID: 757 824 1037 - Passcode: WFF610W20

Collaborators



GRID | In partnership with
WARSAW | UN Environment
Programme



•Trees Around the GLOBE Campaign Team (Brian Campbell and Peter Falcon)

- Introduce the IOP with all logistics (including website)

•GPM: how and why we measure precipitation from space, impact of precipitation (too much, too little, climate change impacts) on land cover and trees (Dorian Janney)

•European Phenology Campaign Team (Lenka Kleger, Bara Semerakova, Dana Votapkova)

- Call to EPC participants to take tree heights and land cover observations

•Urban Heat Island Effect - Surface Temperature Field Campaign Team (Kevin Czajkowski)

- Importance of combining/aligning tree height, land cover, and surface temperature observations

•Trees Around the GLOBE Campaign Team Member and GLOBE Partner (Peder Nelson)

- Aligning to Landsat's 50 years of looking at Earth's change over time

•United Nations Environment Programme (Magda Biesiada, Head of World Environment Situation Room - WESR Unit)

- UNEP@50 and UNEP-GLOBE collaboration

•UNEP/Global Resource Information Database (GRID)-Warsaw Centre (coordinator of GLOBE Poland) (Ela Woloszynska-Wisniewska)

- About the 50 years of UNEP / 25 years of GLOBE Poland and the Decade on Ecosystem Restoration (how is GLOBE supporting this activity?)

•Questions from participants

THE SPRING 2022 TREE HEIGHT AND LAND COVER IOP IS A COLLABORATIVE EFFORT WITH:



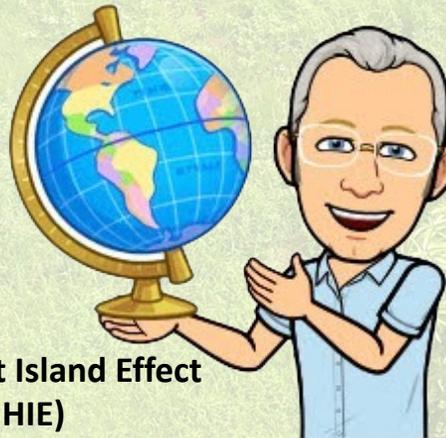
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This Spring 2022 IOP will be part of the:

- 4th year of the Trees Around the GLOBE Student Research Campaign
- 2022 European Phenology Spring Green Up Campaign
- 25th anniversary of GLOBE Poland
- 50th anniversary of the United Nations Environmental Program.



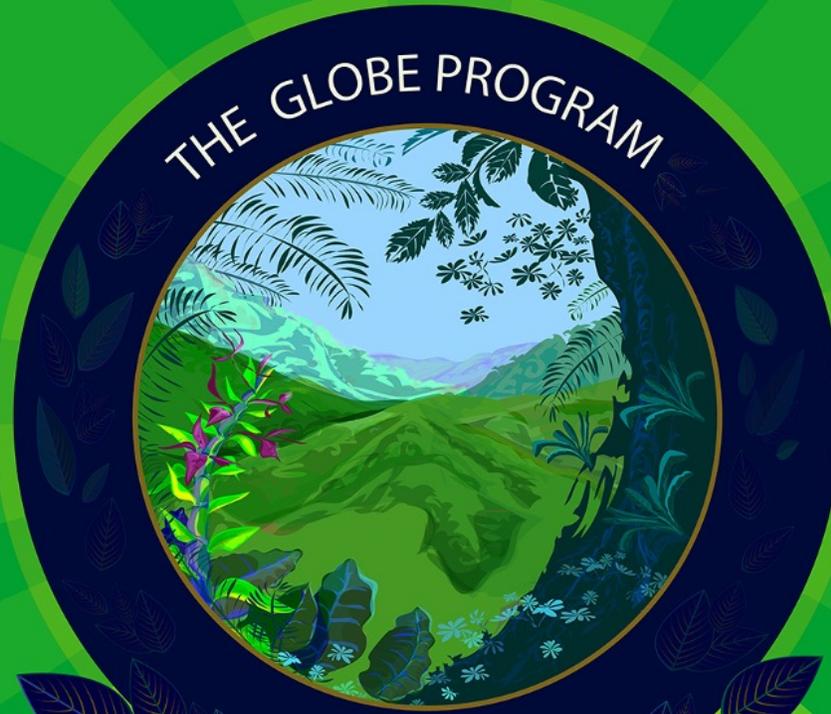
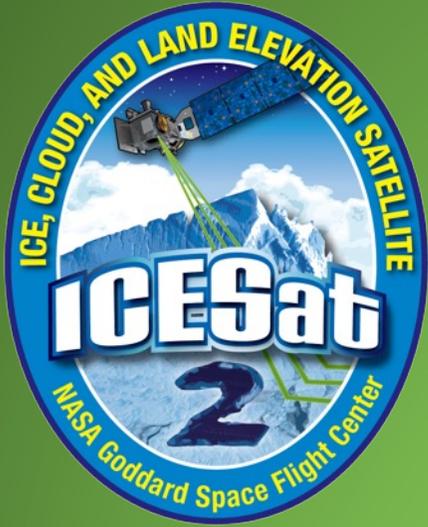
Urban Heat Island Effect
(UHIE)



The IOP will also parallel the:

- 50th anniversary of the NASA Landsat Program, with its 50 years of remote sensing Earth observations
- several NASA missions such as ICESat-2, GEDI, and GPM.

2022 SPRING TREE HEIGHT & LANDCOVER INTENSIVE OBSERVATION PERIOD



22 April 2022 (Earth Day)

to

22 May 2022 (International Biodiversity Day)



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WHY THE SPRING 2022 TREE HEIGHT AND LAND COVER INTENSIVE OBSERVATION PERIOD?

- Everyone, from students to educators to citizen scientists can participate in the IOP by collecting Tree Height and Land Cover observations, using the traditional GLOBE protocol observations and/or the NASA GLOBE Observer App;
- Your observations will add significantly to the GLOBE database and provide vital data for GLOBE student researchers, as well as professional researchers, looking for tree height and land cover data from around the world;
- Lots of data collected in a short amount of time adds to the need for data density. Data density is also achieved when many/multiple observations are taken within a small geographic location;
- Scientists look for dense data observations for specific locations, based on research interests, and use these data dense observations to potentially compare to space-based, airborne, or in-situ field data.

An Example of Data Density from the Netherlands



Tree Height Data

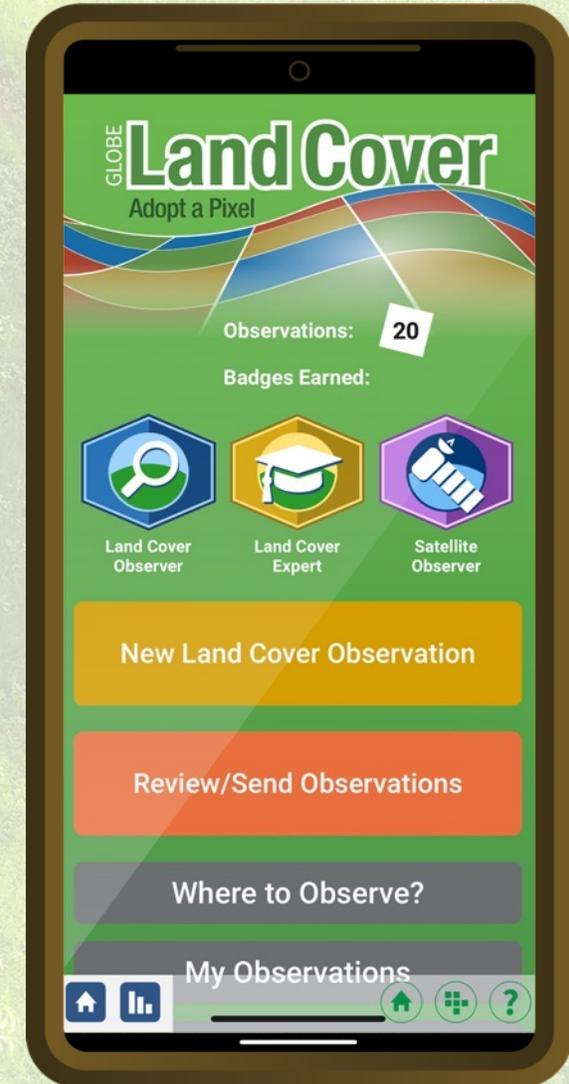
274 observations taken in December 2021

Latitude: 52.2291 to 52.3751

Longitude: 5.8131 to 6.5349

HOW CAN I CONTRIBUTE TO THE SPRING 2022 TREE HEIGHT AND LAND COVER INTENSIVE OBSERVATION PERIOD?

- Collect as much tree height, land cover, and precipitation data as possible within the 22 April – 22 May 2022 timeframe;
- Take multiple measurements in a small geographic area, including multiple measurements of the same trees and land cover;
- Take traditional biometry tree height, land cover and precipitation observations using the GLOBE Program protocols and/or take tree height and land cover observations using the NASA GLOBE Observer Trees Tool and Land Cover Tool;
- Have fun taking observations with your friends, fellow students, colleagues, family members and take observations when you are outside on a walk, in your backyard or neighborhood, or while on vacation, or wherever you want, as long as it is legal and safe to do so.



LET'S ADD EVEN MORE TREE HEIGHT AND LAND COVER DATA TO THE GLOBE DATABASE!

Why Tree Height?

Trees cool and moisten our air and fill it with oxygen and can help balance our carbon budget. Forests are considered one of the world's largest banks for all of the carbon emitted into the atmosphere through natural processes and human activities. Tree height is the most widely used indicator of an ecosystem's ability to grow trees. Observing tree height allows NASA scientists to understand the gain or loss of biomass which can inform calculations of the carbon that trees and forests either take in from or release into the atmosphere. Tracking how trees are changing over time can help us estimate the number of trees that make up an area.



Why Land Cover?

Land cover is the base dataset for many areas of critical science, including hazard analysis for floods, fires and landslides, mapping wildlife habitat, and tracking the impacts of climate change. Even though land cover is familiar to everyone on the planet, the most detailed satellite-based maps of global land cover are still on the order of hundreds of meters [about 330 feet] per pixel. That means that a park in a city may be too small to show up on the global map. GLOBE Observer: Land Cover can fill in local gaps and contribute to consistent, detailed global maps.



**TO LEARN MORE ABOUT THE SPRING 2022 TREE HEIGHT
AND LAND COVER INTENSIVE OBSERVATION PERIOD, VISIT**

<https://www.globe.gov/web/trees-around-the-globe/overview/spring2022iop>

OR

<https://bit.ly/Spring2022IOP>